

CLAIMS

1. A filter element comprising a dimensionally stable porous formed body with an interior that forms a space for unfiltered fluid and a filtrate space, characterized by the fact

that the interior of the formed body (3) is partially filled with a catalyst material (8) or with a material (8') that is coated with catalyst material such that a flow channel (10) remains open.

2. The filter element according to Claim 1, characterized by the fact that a porous or perforated formed body insert (7, 7', 7'') is inserted into the interior such that it is spaced apart from the wall of the formed body (3) and causes the flow channel (10) to remain open, and by the fact

that the intermediate space between the formed body (3) and the formed body insert (7, 7', 7'') is filled with a bulk catalyst material (8) or a bulk material (8') that is coated with catalyst material.

3. The filter element according to Claim 2, characterized by the fact that the formed body insert (7, 7', 7'') consists of a ceramic material, e.g., aluminum oxide, silicone carbide, titanium dioxide, silicone dioxide, zirconium oxide, calcium aluminate or aluminosilicates.

4. The filter element according to Claim 1 or 2, characterized by the fact that the formed body insert (7, 7', 7'') consists of a metal, e.g., special steel, Inconel or Hastelloy.

5. The filter element according to Claim 1 or 2, characterized by the fact that the formed body insert (7, 7', 7'') consists of a plastic.

6. The filter element according to Claim 1, characterized by the fact that a dimensionally stable catalyst body (14, 14', 14'') is inserted into the interior such that it adjoins the formed body (3), wherein said catalyst body consists of a catalyst material or a material that is coated with catalyst material and causes the flow channel (10) to remain open.
7. The filter element according to one of Claims 1-6, characterized by the fact that the uncoated material consists of ceramic fibers or expanded ceramics.
8. The filter element according to one of Claims 1-6, characterized by the fact that the uncoated material consists of metallic fibers or expanded metals.
9. The filter element according to one of Claims 1-6, characterized by the fact that the uncoated material consists of plastic fibers or expanded plastics.
10. The filter element according to one of Claims 1-9 with a cylindrical or rectangular formed body with an interior that is closed on one side, characterized by the fact that the formed body insert (7, 7', 7'') consists of a tube that is open on one or both sides.
11. The filter element according to one of Claims 1-9 with a cylindrical or rectangular formed body with an interior that is closed on one side, characterized by the fact that the catalyst body (14, 14', 14'') consists of a tube that is open on one or both sides.
12. The filter element according to one of Claims 1-9 with a cylindrical formed body with an interior that is open on both sides, characterized by the fact that the formed body insert (7, 7', 7'') consists of a tube that is open on both sides.

13. The filter element according to one of Claims 1-9 with a cylindrical formed body with an interior that is open on both sides, characterized by the fact that the catalyst body (14, 14', 14'') consists of a tube that is open on both sides.
14. The filter element according to one of Claims 1-9 with a disk-shaped formed body that has a peripheral wall, a bottom wall and a top wall which enclose a disk-shaped interior, wherein an inlet or outlet opening is respectively provided in the bottom wall and in the top wall, characterized by the fact that the formed body insert (7, 7', 7'') represents a smaller version of the disk-shaped formed body (3).
15. The filter element according to one of Claims 1-9 with a disk-shaped formed body that has a peripheral wall, a bottom wall and a top wall which enclose a disk-shaped interior, wherein an inlet or outlet opening is respectively provided in the bottom wall and in the top wall, characterized by the fact that the catalyst body (14, 14', 14'') represents a smaller version of the disk-shaped formed body (3).
16. The filter element according to one of Claims 1-15, characterized by the fact that the catalyst material consists of one or more oxides or mixed oxides of rare earths and/or of one or more aluminates and/or of one or more silicates and/or of one or more titanates or titanium dioxides.
17. The filter element according to one of Claims 1-15, characterized by the fact that the catalyst material consists at least of calcium aluminate.
18. The filter element according to Claim 16 or 17, characterized by the fact that the catalyst material is modified with catalyst promoters.

19. The filter element according to Claim 18, characterized by the fact that the catalyst material is doped with catalytically active precious metals or non-precious metals.
20. The filter element according to Claim 19, characterized by the fact that the catalyst material is doped with platinum, palladium, rhodium, gold, silver, nickel, copper, manganese, vanadium, tungsten and/or cobalt.